

REMARKS

Claims 1-11, 13-31, 34-50, 52-70 and 73-82 are pending. Claims 1-11, 13-31, 34-50, 52-70 and 73-82 are rejected.

Claim Amendments

Claim 1 is amended with merely clarifying amendments. Support for these clarifying amendments can be found throughout the specification.

Claims 2-11, 13-31, 34-50, 52-70 and 73-82 are canceled without prejudice or disclaimer.

Claims 83-139 are newly added. Support for these claims can be found throughout the specification and the claims as originally filed, for example on page 7, lines 9-20 (“enables a LLC PDU to be prioritised in RLC/MAC and thus it enables applications to receive the quality of service (QoS) they need”); on page 9, lines 21-27; on page 10, lines 5-7; on page 10, lines 13-23 “In association with activating PDP context QoS characteristics are also defined for the PDP context”; on page 10, lines 34-36; on page 11, lines 1-3; on page 11, lines 9-10; on page 11, lines 21-26; on page 11, lines 31-35; on page 12, lines 4-12; on page 13, lines 6-8; on page 13, lines 11-25; on page 13, lines 28-35; and on page 14, lines 13-17.

No new matter is added.

Rejection made under 35 U.S.C. § 103(a)

The Examiner has rejected claims 1-8, 23-28, 43-48 and 63-68 as being unpatentable under 35 U.S.C. 103(a) over Ravishankar et al. (U.S. Patent Pub. No. 2003/0060210), herein Ravishankar, in view of Puuskari et al. (U.S. Patent Pub. No. 2002/0032800), herein Puuskari. The Applicant includes the following comments to clearly distinguish the claimed invention over the art cited by the Examiner, and respectfully requests a favorable reconsideration of claim 1.

These rejections are respectfully disagreed with, and are traversed below.

It is well established law that in order for an obviousness rejection to be proper, the Patent Office must meet the burden of establishing a *prima facie* case for obviousness. Thus, as interpreted by the Courts, the Patent Office must meet the burden of establishing that all elements of the invention are disclosed in the prior art and that in accordance with *In re Lee*, the prior art

must contain a suggestion, teaching, or motivation for one of ordinary skill in the art to modify a reference or combine references; and that the proposed modification must have had a reasonable expectation of success, determined from the vantage point of the skilled artisan at the time the invention was made.¹

Regarding independent claim 1, which recites:

“A method comprising:

at a radio link control/medium access control protocol layer, receiving at least one logical link control packet data unit from an upper protocol layer, wherein each logical link control packet data unit belongs to a certain packet data protocol context associated with logical link control connection information and wherein **quality of service information relating to the logical link control connection information is defined for the certain packet data protocol context**,

reordering each logical link control packet data unit at the radio link control/medium access control protocol layer according to a relative urgency of transmission of the logical link control packet data unit with respect to a buffered logical link control packet data unit **based on at least the logical link control connection information and the quality of service information**, and

delivering the received logical link control packet data unit and the buffered logical link control packet data unit further from the radio link control/medium access control protocol layer in reordered order,

wherein the method is performed by a mobile station to transfer user data in a wireless packet data network” (emphasis added).

Consider the disclosure of Ravishankar:

“Accordingly, FIGS. 3d and 3e are a signal flow diagram for illustrating a simultaneous voice/data call, admission control in the BSS 108 and Downlink (DL) PDU prioritization based on the BSS 108 visible QoS. In FIGS. 3d and 3e, the MT 102 activates multiple PDP contexts with QoS parameter values relevant for voice (step 362) and non-voice traffic (step 354). The SGSN 110 treats traffic streams corresponding to the two IP addresses according to their negotiated QoS. The appropriate **QoS parameters** (Reliability Class and Precedence Class) are passed on from the SGSN 110 to the BSS 108 **along with every LLC frame**. The BSS 108 then **uses this information for scheduling purposes and to determine RLC transmission mode**” (paragraph [0041], emphasis added).

Ravishankar teaches that “QoS parameters” are passed over a radio-interface “along with every LLC frame” and to be used “for scheduling purposes and to determine RLC transmission

¹ *In Re Fine*, 5 U.S.P.Q.2d 1596, 1598 (Fed. Cir. 1988); *In Re Wilson*, 165 U.S.P.Q. 494, 496 (C.C.P.A. 1970); *Agmen v. Chugai Pharmaceuticals Co.*, 927 U.S.P.Q.2d, 1016, 1023 (Fed. Cir. 1996); *In Re Sang Su Lee*, 277

mode". Therefore Ravishankar teaches that the upper layer (e.g., LLC layer) defines how to schedule packet data at the lower layer (e.g., RLC/MAC) according to QoS parameters relating to the PDP context of packet data. Clearly, Ravishankar does not disclose or suggest "reordering each logical link control packet data unit **at the radio link control/medium access control protocol layer** according to a relative urgency of transmission of the logical link control packet data unit with respect to a buffered logical link control packet data unit **based on at least the logical link control connection information and the quality of service information**" as in claim 1.

Consider the disclosure of Puuskari:

"Additionally, the filter may comprise any data which can be used for identifying data packets requiring a **certain QoS**, and which should therefore be **multiplexed onto certain PDP contexts**, such as a Source Address, an RSVP Flow Identifier; a Port Number (e.g. the TCP or UDP port number used), an Upper layer protocol (e.g. UDP, RTP, etc.), a Type of Service (IPv4), a Connection Type (IPv6) and/or a Traffic Class field (IPv6). The filter may also comprise the IP Address Space for giving a higher QoS to packets coming from a corporate network (e.g. an intranet) than for packets from the common Internet" (paragraph [0007], emphasis added).

"Next, in step 6-5, the SGSN selects a Radio Priority Level based on each negotiated QoS profile, and returns an Activate PDP Context Accept (comprising a PDP type, a PDP Address, an NSAPI, the negotiated QoS Profiles, a Radio Priority Level and a SAPI for each QoS profile, the filter and PDP configuration options) to the MS. Now the SGSN is able to route PDP PDUs between the GGSN and the MS. The **SAPI indicates which QoS profile uses which SAPI**" (paragraph [0062], emphasis added).

Puuskari teaches "the filter may comprise any data which can be used for identifying data packets requiring a certain QoS, and which should therefore be multiplexed onto certain PDP contexts" (par 7). Further Puuskari discloses that the "SAPI indicates which QoS profile uses which SAPI". However, Puuskari does not disclose or suggest "quality of service information relating to the logical link control connection information" as in claim 1. Rather, Puuskari teaches that QoS information relating to the PDP context of the packet data indicates the SAPI of the packet data. Clearly, Puuskari does not disclose or suggest "reordering each logical link

control packet data unit at the radio link control/medium access control protocol layer according to a relative urgency of transmission of the logical link control packet data unit with respect to a buffered logical link control packet data unit **based on at least the logical link control connection information** and the quality of service information" as in claim 1.

As neither Ravishankar nor Puuskari teach "quality of service information relating to the logical link control connection information" and "reordering each logical link control packet data unit at the radio link control/medium access control protocol layer according to a relative urgency of transmission of the logical link control packet data unit with respect to a buffered logical link control packet data unit based on at least the logical link control connection information and the quality of service information" as in claim 1, the combination of Ravishankar and Puuskari, herein Ravishankar-Puuskari, also does not disclose or suggest these elements of claim 1. Thus, Ravishankar-Puuskari does not disclose or suggest all elements of claim 1. Therefore, Ravishankar-Puuskari does not make obvious claim 1. For at least this reason claim 1 is in condition for allowance.

In light of the discussion above, the Applicant respectfully asserts that a prima facie case for obviousness was not presented as required by the court in *In re Lee*. As such, the Applicant respectfully requests that the Examiner reconsider and withdraw these rejections to claim 1.

As claims 101, 119 and 139 recite similar language to that discussed above with reference to claim 1, claims 101, 119 and 139 are likewise in condition for allowance. As claims 83-100, 102-118 and 120-138 depend upon claims 1, 101 and 119, they are likewise in condition for allowance.

For the foregoing reasons, the Applicant believes that each and every issue raised by the Examiner has been adequately addressed and that this application is in a condition for allowance. As such, early and favorable action is respectfully solicited.

S.N.: 10/687,209
Art Unit: 2616

879A.0085.U1 (US)

Respectfully submitted:



12/05/08

Ricardo Ochoa

Date

Reg. No.: 61,545

Customer No.: 29,683

HARRINGTON & SMITH, PC

4 Research Drive

Shelton, CT 06484-6212

Telephone: (203) 925-9400

Facsimile: (203) 944-0245

Email: ROchoa@HSpatent.com

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Dec. 5, 2008
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J. D. Donahue
Name of Person Making Deposit